likely to be dependent on both their competency and the information provided to them about their medication. Implementation of specific teaching interventions may increase understanding, and the methods used may need to be intensive or repetitive to take into account patients' poor cognitive functioning. Even short-term patients with better cognitive functioning do not seem to benefit as much as might be expected from weekly medication groups supplemented by individual instruction (9). Supervised self-administration of medication may be the most effective form of medication education.

The finding that patients who understood the therapeutic action of medication were not more likely to recognize their need for medication and were not more likely to believe they should continue taking it is reminiscent of a finding of an earlier study of acutely psychotic patients (10). The previous study showed that impaired understanding of the therapeutic action of medication was significantly associated with thought disorder but did not affect patients' acceptance or refusal of neuroleptics. Psychiatric patients who understand their treatment do not generally seem to have any greater likelihood of consenting to it.

Nor did understanding of the therapeutic action of medication seem to decrease the number of complaints about side effects. Patients' knowledge of side effects was found to be low. Although seven patients said they had heard of tardive dyskinesia, none were able to give an adequate description of the syndrome. It seems that chronic patients are not very knowledgeable about the side effects of neuroleptic medication, including tardive dyskinesia.

Some caution is needed in interpreting empirical studies related to informed consent. Ultimately the issue of whether the legal doctrine of informed consent is desirable is a matter of values, and its desirability should be determined by more than scientific inquiry. In clinical practice the costs and benefits of neuroleptic medication must be evaluated, and judgments will inevitably vary.

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Effects of Hospitalization on Use of Outpatient Medical and Psychiatric Services

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Little attention has been given to the interrelationship between medical and psychiatric service utilization in public-sector facilities. Research in the public sector is important because patients make little or no payment, and practitioners have different remunerative incentives than in other settings (1,2). Our study of service utilization patterns in a Veterans Affairs medical center may have social policy implications for national health insurance because some characteristics of the VA system, such as a single-payer structure with salary ceilings for providers, are similar to those of such a program.

We hypothesized that psychiatric outpatients who have different types of hospitalization—that is, medical or psychiatric—would differ in their use of outpatient psychiatric and medical services. Since hospitalization generally signifies greater severity of illness, we expected psychiatric inpatients to have more outpatient psychiatric visits than medical inpatients or psychiatric outpatients with no hospitalizations. This hypothesis runs counter to reports that in the year during which patients are hospitalized for a psychiatric disorder, they do not use outpatient psychotherapy any more frequently than psychiatric outpatients who are not hospitalized (3).

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Furthermore, extant data suggest that the most symptomatic patients use both medical and psychiatric services at a high rate (4). Thus we expected that over the course of our observation, patients who had a psychiatric hospitalization would have more outpatient medical visits than psychiatric outpatients with no hospitalizations; we similarly expected that patients with medical hospitalizations would utilize more psychiatric outpatient treatment.

Because we measured service utilization, our study is somewhat similar to research on the offset effect, which examines whether psychiatric treatment reduces the subsequent use or cost of medical services (5). However, most studies of the offset effect clearly demarcate the start of mental health treatment in order to measure subsequent service use. We examined use of both medical and psychiatric services before and after both types of inpatient treatment. Our focus was therefore on the concurrent ongoing relationship between the use of medical and psychiatric services. We expected that persons who received inpatient psychiatric treatment would have a higher concurrent use of medical services compared with patients who did not.

Methods

Subjects were volunteers selected at random from among veterans receiving outpatient mental health treatment at the VA Medical Center in White River Junction, Vermont, from 1987 to mid-1988. Seventeen of the original 202 subjects were lost to attrition, leaving a total of 185. Due to missing data, some analyses included fewer than 185 subjects.

Patients were categorized into four groups based on whether they had been hospitalized for either medical or psychiatric reasons during an 18-month period before the study (referred to here as the prestudy period) and an 18-month period after the study began (the study period). Some patients did not live in the area served by our medical center for the full prestudy period. For these patients, service utilization measures were prorated, based on their months in residence and utilization of services during that time, to yield an estimate of utilization for the prestudy period had they lived in the area for the entire 18-month period.

The first group of patients in our study included 23 subjects who had both psychiatric and medical hospitalizations. The second group consisted of 34 patients who were hospitalized for medical reasons only. In the third group were 37 patient with only psychiatric hospitalizations. The fourth group consisted of 91 patients with no hospitalizations.

Information about the number of medical and psychiatric hospitalizations, lengths of stay, the number of outpatient medical and psychiatric clinic visits, and medical and psychiatric inpatient diagnoses were obtained from our hospital records. Data on non-VA outpatient medical and psychiatric service use were obtained from patients' self-reports. Inpatient medical diagnoses were classified as orthopedic; neurological; ear, nose, or throat; internal medicine; cardiological; surgical; and detoxification-related problems. Inpatient psychiatric diagnoses were categorized as major affective disorder, personality disorder, substance abuse, schizophrenia, posttraumatic stress disorder (PTSD), and miscellaneous disorders (for example, chronic pain or an organic disorder).

The primary psychiatric outpatient diagnosis for each patient was obtained from the treating clinician or from records when possible. These diagnoses were classified as PTSD, personality disorder, schizophrenia, adjustment disorder, depression (other than major), major affective disorder, organic disorder, anxiety disorder, substance abuse, and no diagnosis. It should be noted that most patients with a primary diagnosis of substance abuse are referred to a sister VA hospital for inpatient treatment.

Inpatient and outpatient psychiatric diagnoses were not necessarily identical because hospitalizations may not have coincided temporally with outpatient therapy. Thus patients may have been treated for different problems at different times, and providers may have differed in their diagnosis of the patient.

A structured interview was conducted with each patient at four different times, including an initial interview and three follow-up interviews six months apart. Each interview assessed demographic characteristics, social support, substance use, and non-VA service use. Information about alcohol and other drug consumption and social support was obtained from standard instruments (6,7). At the first and last interviews, the Symptom Checklist-90 (SCL–90) (8) and the Global Assessment Scale (GAS) (9) were administered to measure patients' clinical improvement. Six different interviewers with graduate degrees in psychology were trained by the project director to ensure uniformity of procedures.

Results

A multiple-factor analysis of variance (MANOVA) showed that the four groups of patients differed significantly in their use of services ($F=5.03$, $df=12,537$, $p<.01$). For the 36-month period, patients in the group that had both psychiatric and medical hospitalizations were the highest users of inpatient and outpatient medical services and non-VA outpatient psychiatric services. Compared with the group of patients who had only medical hospitalizations, the group with both types of hospitalization had more medical inpatient admissions and longer lengths of stay during the 36-month period (mean±SD number of admissions = 1.57±.84 and 2.77±2.42, respectively; $F=7.04$, $df=1,55$, $p<.01$; mean±SD number of days = 10.30±11.36 and 23.13±30.64, respectively; $F=4.99$, $df=1,55$, $p<.05$).

In addition, the group of patients with both medical and psychiatric hospitalizations had more outpatient medical visits during the 36-month period (mean±SD = 20.25±13.77 visits) than the group with no hospitalizations (8.31±8.58 visits) and the group with only psychiatric hospitalizations (10.91±22.75 visits) ($F=6.80$, $df=3,181$, $p<.01$). The group with both types of hospitalization had more outpatient visits than the group with medical hospitalizations only (mean±SD = 16.76±9.19 visits), but the difference was not significant. Results of the MANOVA also showed that during the 18-

Table 1
Mean number and type of outpatient visits and mean scores on psychiatric scales of 185 veterans receiving outpatient psychiatric care during a three-year period,[1] by type of hospitalization received

Type of outpatient visit and score	Type of hospitalization							
	Psychiatric and medical (N=23)		Medical only (N=34)		Psychiatric only (N=37)		None (N=91)	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Medical visits								
Prestudy	16.94	14.61	15.76	11.20	8.56	10.22	8.62	8.33
Study	23.56	12.93	17.76	18.39	13.27	35.28	8.00	8.82
Psychiatric visits								
Prestudy	14.35	10.26	10.07	8.09	16.18	14.45	15.57	15.32
Study	20.65	15.41	10.21	6.23	19.05	19.00	11.94	11.78
Symptom Checklist-90 score[2]								
Initial	178.14	67.55	178.97	57.70	177.23	59.99	167.18	68.40
Final	208.86	63.81	177.56	63.88	213.66	70.23	177.30	65.35
Global Assessment Scale[3] score								
Initial	63.32	9.82	61.85	12.91	64.59	9.20	64.82	11.50
Final	59.54	15.70	66.26	19.71	61.43	18.44	68.49	16.79

[1] 18 months before study implementation (prestudy), 18 months after (study)
[2] Possible scores range from 0 to 360; higher scores indicate greater symptomatology.
[3] Possible scores range from 1 to 100; higher scores indicate better functioning.

month study period, the group with both types of hospitalization had significantly more non-VA outpatient psychiatric visits (mean±SD=15.64±28.22) than the group with only medical hospitalizations (1.71±4.85 visits) ($F=3.04$, $df=3,180$, $p<.05$).

As shown in Table 1, the group with both medical and psychiatric hospitalizations significantly increased their outpatient psychiatric visits over the 36-month period compared with the nonhospitalized group, whose use of outpatient services decreased ($F=4.0$, $df=3,181$, $p<.01$). For the group with only psychiatric hospitalizations, the number of outpatient psychiatric visits also increased over time but not to the extent of the group with both types of hospitalization. In part, the increase in use of outpatient services by these two groups could reflect greater clinical need, which is supported by the fact that both groups became more symptomatic over time, as measured by the GAS, while the group with medical hospitalizations only and the group with no hospitalizations became less symptomatic ($F=2.71$, $df=3,177$, $p<.05$).

A similar trend emerged for the SCL–90 scores; that is, the scores of the groups with psychiatric hospitalizations increased by about 30 points (indicating greater symptomatology), whereas the scores of the other two groups showed little change.

The groups were not significantly different in the number of psychiatric hospitalizations and in other measures of psychiatric dysfunction such as alcohol and drug use and level of social support. Groups also did not differ in medical or psychiatric diagnoses. The group with medical hospitalizations only was significantly older than the other groups, and the group with psychiatric hospitalizations only was significantly younger. The group with no hospitalizations had significantly more years of education than the group with only medical hospitalizations. However, these differences were judged not to be relevant to other findings.

Discussion

As expected, persons who were hospitalized for psychiatric reasons received more outpatient psychiatric care than those who had no psychiatric hospitalizations. Patients who were hospitalized for medical reasons received more outpatient medical care than those who had no medical hospitalizations. The impact of type of hospitalization, however, did not extend across categories of care; that is, admission for a given type of care was not associated with greater outpatient use of the other type of care.

Unexpectedly, among patients who had medical hospitalizations, those who also had psychiatric hospitalizations had more inpatient medical admissions, and their lengths of stay for medical admissions were longer. Thus patients with psychiatric admissions had a significantly greater demand for services when hospitalized for medical reasons. One implication is that use of inpatient medical services may be reduced if patients with a history of psychiatric admissions are routinely referred to the hospital's consultation-liaison psychiatrist on admission (10).

The study reported here examined the relationship of hospitalization and concurrent use of outpatient medical and psychiatric services. The findings may also be relevant to research on the offset effect and on clinical outcomes. Studies of the offset phenomenon typically ignore hospitalization history and focus almost exclusively on outpatient medical services received before and after psychiatric treatment. In regard to clinical outcome, the results of this study showed that had patients not been categorized by type of hospitalization, no differences would have been found between initial and final GAS and SCL–90 scores. Thus this study on concurrent utilization of services suggests that patients' hospitalization history may complicate the offset and outcome picture.

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Elements of a Psychosocial Clubhouse Program Associated With a Satisfying Quality of Life

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Deinstitutionalization has seriously compromised the quality of life of many chronic mentally ill patients (1). Despite the frequent failure of efforts to coordinate care outside the hospital, some community-based programs, such as Fountain House in New York City (2), Training in Community Living in Madison, Wisconsin (3), and a replication of the Madison model in Sydney, Australia (4), are notable for having enhanced the quality of life of chronic mental patients. However, we do not know which elements of those programs are primarily responsible for improved quality of life.

This paper presents preliminary findings from an evaluation of services important for the subjective quality of life of chronic mentally ill patients participating in a community-based psychosocial rehabilitation program. The program is patterned after the Fountain House clubhouse model.

We expected that services affecting patients' perceptions of mastery or personal control would be related to satisfaction with the quality of their lives. A sense of mastery refers to individuals' perceptions of their ability to act on and affect their environment (5). Without a sense of mastery, individuals tend to give up trying to achieve what they want, which compromises their coping efforts and their chances for a satisfying life (6,7).

A primary aim of model programs for chronic mentally ill people is to increase patients' control of situations and improve their decision-making power. Model programs offer a range of services, including psychiatric treatment, psychosocial and vocational rehabilitation, supervision, social contacts, a structure of activities, and services to meet basic needs. In addition, these programs are defined by common principles, including approaches to treatment and service delivery that stress patients' strengths rather than the weaknesses associated with their illness (8). The goal of such approaches may be considered to be "empowerment" (9,10). Rehabilitation programs with such goals presume that perceptions of personal control are important for quality of life.

Methods

Setting. The psychosocial rehabilitation program we studied—the Club/Habilitation Services Program—was started by the state of New Jersey in 1973 and is part of the community mental health center operated by the University of Medicine and Dentistry of New Jersey in Piscataway. The chronic mentally ill patients who participate are referred to as "members" of the clubhouse-style program, which operates eight hours a day, six days a week. Vocational assessment and rehabilitation are offered in 14 prevocational areas. A transitional employment program provides temporary jobs in local companies. Work on psychosocial skills occurs in the context of prevocational skill training. The CMHC provides psychiatric treatment.

Club members have opportunities for a great deal of social contact. The staff worker heading each prevocational area serves as the case manager for the members involved in that area, provides general supervision, and arranges for services to meet members' basic needs, including housing, financial support, and medical care. The philosophical foundation of the club incorporates an ideology of empowerment.

Procedures. We sought to inter-

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